

App. No. 10/526,049
Office Action Dated May 13, 2009

IN THE CLAIMS

Amendments to the claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A process for preparing glucose dehydrogenase, comprising:
introducing DNA containing the sequence described in SEQ ID NO [[.]]: 1 coding for an α subunit, which has a glucose dehydrogenase activity, and a β subunit, which is an electron-transfer protein, into a microorganism belonging to the genus *Pseudomonas* to obtain a transformant, and culturing this transformant to produce a first glucose dehydrogenase containing said β subunit and a second glucose dehydrogenase not containing said β subunit.
2. (Original) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said α subunit has a molecular weight of approximately 60kDa as determined by SDS-polyacrylamide gel electrophoresis under reducing conditions; and
said β subunit has a molecular weight of approximately 43kDa as determined by SDS-polyacrylamide gel electrophoresis under reducing conditions.
3. (Original) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said DNA contains a base sequence coding for a γ subunit which has a molecular weight of approximately 14kDa as determined by SDS-polyacrylamide gel electrophoresis under reducing conditions; and
said first and second glucose dehydrogenase are produced as containing said γ subunit.
4. (Canceled)
5. (Original) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said DNA is obtained from a microorganism belonging to the genus *Burkholderia* and capable of producing an enzyme having glucose dehydrogenase activity.

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6. (Original) The process for preparing glucose dehydrogenase as recited in Claim 5, wherein said microorganism belonging to the genus *Burkholderia* is the *Burkholderia cepacia* KS1 strain (FERN BP-7306).

7. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said α subunit has an amino acid sequence which is the amino acid sequence of SEQ ID NO[[.]]: 3, ~~or an amino acid sequence wherein one or a plurality of amino acid residues have been substituted, deleted, intercalated or added in the amino acid sequence of SEQ ID NO.: 3.~~

8. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 7, wherein said DNA contains a base sequence coding for the α subunit consisting of base[[s]] Nos. 764 to 2380 among the base sequence of SEQ ID NO[[.]]: 1.

9. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said β subunit has an amino acid sequence which is the amino acid sequence of SEQ ID NO[[.]]: 5, ~~or an amino acid sequence wherein one or a plurality of amino acid residues have been substituted, deleted, intercalated or added in the amino acid sequence of SEQ ID NO.: 5.~~

10. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 9, wherein said DNA contains a base sequence coding for the β subunit consisting of base[[s]] Nos. 2386 to 3660 among SEQ ID NO[[.]]: 1.

11. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 3, wherein said γ subunit is the amino acid sequence of SEQ ID NO[[.]]: 2, ~~or an amino acid sequence wherein one or a plurality of amino acid residues have been substituted, deleted, intercalated or added in the amino acid sequence of SEQ ID NO.: 2.~~

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12. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 11, wherein said DNA contains a base sequence coding for the γ subunit consisting of base[[s]] Nos. 258 to 761 among the base sequence of SEQ ID NO[[.]]: 1.

13. (Original) The process for preparing glucose dehydrogenase as recited in Claim 12, wherein said DNA contains a base sequence coding for the γ subunit in a region that is more upstream than the base sequence coding for the α subunit.

14. (Original) The process for preparing glucose dehydrogenase as recited in Claim 1, wherein said DNA contains a base sequence coding for a signal peptide of said β subunit.

15. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 15, wherein said signal peptide has the amino acid sequence of amino acids Nos. 1 to 22 among the amino acid sequence of SEQ ID NO[[.]]: 4.

16. (Currently Amended) The process for preparing glucose dehydrogenase as recited in Claim 15, wherein said signal peptide is coded by the base sequence of base[[s]] Nos. 2386 to 2451 among the base sequence of SEQ ID NO[[.]]: 1.

17. (New) A process for preparing glucose dehydrogenase, comprising:

introducing DNA containing the sequence described in SEQ ID NO: 1 coding for an α subunit, which has a glucose dehydrogenase activity, and a β subunit, which is an electron-transfer protein, into a microorganism belonging to the genus *Pseudomonas* to obtain in a transformant, and culturing this transformant to produce a first glucose dehydrogenase containing said β subunit and a second glucose dehydrogenase not containing said β subunit, wherein said microorganism belonging to *Pseudomonas* is *Pseudomonas putida*.

18. (New) The process for preparing glucose dehydrogenase as recited in Claim 17, wherein said DNA is obtained from a microorganism belonging to the genus *Burkholderia* and capable of producing an enzyme having glucose dehydrogenase activity.

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19. (New) The process for preparing glucose dehydrogenase as recited in Claim 18, wherein said microorganism belonging to the genus *Burkholderia* is the *Burkholderia cepacia* KS1 strain (FERN BP-7306).